station using a single carrier frequency, the method comprising the steps of:

associating a first fixed correlation data pattern with the first base station to control communication with the plurality of remote radio units;

within the first base station, receiving radio signals from the plurality of remote units, said radio signals including a received correlation data pattern and additional data;

within the first base station, detecting said received correlation data pattern and generating a correlation value indicative of a correlation between said received correlation data pattern and said first fixed correlation data pattern; and

within the first base station, processing said received additional data only if said correlation value is above a predetermined threshold, whereby the first base station only process said additional data only from the ones of the plurality of remote units that transmit a correlation pattern sufficiently correlated with said first fixed synchronization data pattern.

39. The method of claim **38** for use with a second base station, the method further including the steps of:

associating with the second base station a second fixed correlation data pattern different from said first fixed correlation data pattern to control communication with the plurality of remote radio units;

within the second base station, receiving radio signals from the plurality of remote units, said radio signals including a received correlation data pattern and additional data;

within the second base station, detecting said received correlation data pattern and generating a correlation value indicative of a correlation between said received correlation data pattern and said second fixed correlation data pattern; and

within the second base station, processing said received additional data only if said correlation value is above a predetermined threshold, whereby the first base station only process said additional data only from the ones of the plurality of remote units that transmit a correlation pattern sufficiently correlated with said first fixed synchronization data pattern, and the second base station only process said additional data only from the ones of the plurality of remote units that transmit a correlation pattern sufficiently correlated with said second fixed synchronization data pattern.

40. A system for the control of radio communications, comprising:

a plurality of remote radio units having transmit and receive capability, each of said remote units operating in a first mode to transmit a poll request signal to initiate communications, and a second mode to transmit data;

a plurality of base stations having transmit and receive capability, each of said base stations sequentially transmitting a poll signal to said plurality of remote radio units, said poll signal including a poll response sequence instructing at least some remote radio units to when to respond to said poll signal; and

a central controller communicating with each of said base stations and providing polling assignment commands to each of said base stations to instruct each of said base stations when to transmit said poll signal, whereby each of said base station transmits said poll signal in accordance with said polling assignment commands.

41. The system of claim **40**, further including a timer within each of said base stations, said timer being used by said base stations to transmit said poll signal in accordance with said polling assignment commands.

42. The system of claim **41**, further including a master timer within said central controller, said central controller periodically transmitting time signals to said timer in each of said base stations to synchronize said timer within each of said base stations with said master timer.

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